

non-traded goods (NON-TRADED); and 3) Costs evenly split between traded and non-traded goods (MIX). STD-CARE costs freely varied from 0–100% traded goods. GDP was about \$600 using the exchange rate, I\$1865 using PPP. The outcome measure was the incremental cost-effectiveness ratio stated as multiples of GDPs/DALY (Disability-adjusted Life Year). We considered the commonly used threshold of 1GDP, as well as WHO recommendations: ≤ 1 GDP “very cost-effective”, 1–3GDP “cost-effective”. Parameters were chosen to achieve an ICER of 4GDP for XCHG. **RESULTS:** By definition, the ICER is constant (4GDP) for XCHG. For NON-TRADED using I\$, the ICER was ≥ 4 GDP in all cases. For TRADED using I\$, the ICER was < 1 when $< 79\%$ of STD-CARE costs were traded goods. For MIX using I\$, ICERs were never below 1GDP, but were below 3GDP when $< 76\%$ of STD-CARE costs were traded goods. **CONCLUSION:** Adjusting prices using purchasing power parity (I\$’s) as opposed to the unadjusted official exchange rate can dramatically alter conclusions when comparing interventions involving different proportions of traded goods. In particular, an intervention with costs primarily from traded goods (e.g. vaccination) may be clearly *not* cost-effective using the exchange rate, yet appear very cost-effective after adjusting for purchasing power parity.

PMCS

EVALUATING AN ONLINE CALCULATOR FOR ANALYZING INCREMENTAL NET BENEFIT AND THE EXPECTED VALUE OF PERFECT INFORMATION FROM PATIENT LEVEL DATA

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OBJECTIVES: To evaluate an online calculator for analyzing incremental net benefit and expected value of perfect information. **METHODS:** An online calculator was developed that generates incremental net benefit (INB) and expected value of perfect information (EVPI) statistics and graphs from patient level cost and effectiveness data and is freely available at <http://www.HealthStrategy.com>. The calculator was compared to two other software options: Obenchain’s ICEplane software which can be downloaded from <http://www.math.iupui.edu/~indyasa/bobdown.htm> and an MS Excel module developed by Nixon, Wonderling and Grieve, and downloadable through <http://www.mrc-bsu.cam.ac.uk>. For the comparison, three datasets were utilized from published studies dealing with fluoxetine (FLUX), a randomized test dataset (RND), and acupuncture (ACCU). **RESULTS:** INB values on the three datasets at various lambda threshold values (WTP) between HealthStrategy, ICEplane and Nixon were as follows: ACCU (WTP at mean ICER, 10088): 2.0 vs 2.7 vs 2.0; RND (WTP at 1.0): 2.0 vs 2.4 vs 2.0; and FLUX (WTP at 1742): 57472 vs 56570 vs 56979. ICEplane does not calculate EVPI, but the Nixon module was adapted by adding a column for the estimation of the unit normal loss integral as documented by Griffin and Chilcott. The respective HealthStrategy and Nixon module EVPI values for each dataset were as follows: ACCU (WTP at mean ICER): 67.9 vs 66.7; RND (WTP at 0.0): 0.167 vs 0.105; and FLUX (WTP at 0.0): 169.8 vs 169.8. **CONCLUSION:** All three software provide basic statistics and graphs including scatter plots, confidence intervals and acceptability curves. For INB and EVPI, the HealthStrategy and Nixon packages use parametric calculations requiring assumptions not always met with cost effectiveness data. For future research, more comprehensive software should be added to this comparison like Stata, the R statistical package and Winbugs, along with consideration of population EVPI and expected value of sample information (EVS).

PMC6

A COST-EFFECTIVENESS STUDY OF TRANSPORTING PERSONS WITHOUT MEDICAL NEEDS BY AMBULANCE. A PROSPECTIVE STUDY OF AMBULANCE SERVICE IN SWEDEN

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OBJECTIVES: Overuse of emergency services and overcrowding of A&E departments is a major problem. Many patients suffering from minor illness or injuries often call the emergency dispatch centre requesting an ambulance for transport to a hospital, where this is included in the welfare package as in most OECD countries. The aim of this study was to analyze the characteristics of patients transported by ambulance, and assess the appropriateness related to age, sex, diagnoses, and urban or rural areas respectively. **METHODS:** This study was prospective, cross sectional in urban and rural districts in Sweden. Assessments made by the emergency medical dispatch operators for 1977 consecutive users of ambulance, were reviewed and evaluated by the ambulance staffs on the scene at the end of the pre-hospital care. **RESULTS:** Assessment made by the ambulance staff indicated that a majority of people transported by the ambulance service had no medical needs for prehospital interventions. There was a substantial safety margin in the priority assessments. Only ten percent had potentially life threatening conditions. In urban areas one third of the patients for whom an ambulance were assigned did not need the ambulance service. Several of these were ordered by hospital staff for transportation of elderly patients to other providers. In the more sparsely populated areas the medical status of the patients generally was more severe, more medical treatment was given in the ambulances, and the ambulances was more frequently judged as the appropriate mode of transport in these regions. **CONCLUSION:** Due to the safety aspects, there is an overuse of ambulance services increasing the need for back-up vehicles. This means that there are no marginal costs, while the marginal utility is decreasing. For this we have a formula.

PMC7

A PRE-POST TIME IN MOTION METHODOLOGY TO EXAMINE PRODUCT WASTAGE REDUCTION: PILOT RESULTS IN MAGNETIC RESONANCE CONTRAST MEDIA PHARMACY BULK PACK

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OBJECTIVES: To demonstrate the applicability of time in motion methodology in detecting difference in MR contrast media wastage and the potential costs savings of magnetic resonance (MR) contrast media Pharmacy Bulk Pack (PBP) use. **METHODS:** Time in motion methodology has been demonstrated as an effective tool in highlighting efficiencies in process-oriented tasks and increasingly used in health care to measure efficiency. We designed a prospective, time in motion study to examine the pre and post use of MR contrast media PBPs. Seven MR imaging centers collected 30 continuous observations (for approximately 2 weeks). During the pre period, data were collected via a quantitative Case Report Form on the time and number of MR procedures, patient weight, body part scanned, contrast media details (volume used, packages opened, volume discarded), and total scan time. MR center-specific contrast media usage algorithms, which incorporated gadopentetate dimeglumine PBP, were developed based on data collected in the pre-period to enhance efficiency and reduce wastage, and were